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22. An isolated gene which codes for a polypeptide having an antigenicity which is substantially the same as that of the stem region of hemagglutinin molecule of human influenza A virus and lacking a globular head region of hemagglutinin molecule of human influenza A virus.

23. The isolated gene as claimed in claim 22, wherein said gene is selected from a gene having the DNA sequence of SEQ ID No. 49 and a gene having the DNA sequence of SEQ ID No. 57.

24. An isolated polypeptide, comprising an amino acid sequence which elicits an immune response in a mammal, which generates an antibody that specifically binds to an epitope located on both the HA1 and HA2 stem regions of hemagglutinin of intact human influenza virus subtypes H1N1, H2N2 or H3N2 and which lacks hemagglutinin activity of hemagglutinin of human influenza A virus.

25. The isolated polypeptide according to claim 24, wherein said polypeptide comprises an amino acid sequence including a TGLRN polypeptide sequence of SEQ ID No. 1 and a GITNKVNSVIEK polypeptide sequence of SEQ ID No. 2.

26. The isolated polypeptide according to claim 24, which is recognized by monoclonal antibody C179 produced by hybridoma C179 (FERM BP-4517).

27. The isolated polypeptide according to claim 24, wherein said polypeptide comprises an amino acid sequence including a TGMRN polypeptide sequence of SEQ ID No. 3 and a QINGKLNR(L/V)IEK polypeptide sequence of SEQ ID No. 4.

28. The isolated polypeptide according to claim 24, which is recognized by monoclonal antibody AI3C produced by hybridoma AI3C (FERM BP-4516).

29. A method for immunizing a mammal against human influenza A virus, which comprises administering to a mammal in need thereof an immunizing effective amount of the polypeptide according to claim 24.

30. A method for producing a monoclonal antibody which specifically binds to an epitope located on both the HA1 and HA2 stem regions of hemagglutinin of intact human influenza virus subtypes H1N1, H2N2 or H3N2, which comprises administering an antibody producing effective amount of the polypeptide according to claim 24 to a mammal, isolating spleen cells from the mammal, fusing the spleen cells with myeloma cells to produce hybridomas, and screening the hybridomas for an antibody which specifically binds to an epitope located on both the HA1 and HA2 stem regions of hemagglutinin of intact human influenza virus subtypes H1N1, H2N2 or H3N2.